Nazreen Shah Ambalath

Curriculum Vitae

☎ +91-7034550009
✉ nazreens@iiitd.ac.in
🖥 nazreenshah.github.io
🌐 nazreenshah
in nazreenshah1997

Education

2022–Ongoing **PhD, Department of ECE**, *Indraprastha Institute of Information Technology(IIIT)*, Delhi, India.
Supervisor: Dr. Ranjitha Prasad
Research Areas: Federated Learning, Personalized Federated Learning, Continual Federated Learning, Unsupervised Federated Learning, Decentralized Federated Learning, 8.85* CGPA

2015–2020 **Integrated M.Tech in Computer Science**, *University of Hyderabad*, Telangana, India.
First Class, 7.41 CGPA

Professional Positions

Aug,2024–Dec,2024 **Teaching Assistant**, *Indraprastha Institute of Information Technology*, Delhi, India.
Probability and Random Process (Monsoon Semester)

Jan,2023–May,2023 **Teaching Assistant**, *Indraprastha Institute of Information Technology*, Delhi, India.
Convex Optimization (Winter Semester)

Aug,2023–Dec,2023 **Teaching Assistant**, *Indraprastha Institute of Information Technology*, Delhi, India.
Distributed and Federated Machine Learning (Monsoon Semester)

Sep,2021–Jan,2022 **Research Assistant**, *Indraprastha Institute of Information Technology*, Delhi, India.
Supervised by Dr. Ranjitha Prasad, ECE department
Project funded by DST-SERB, India: "Personalized Federated Learning".

Sep,2020–Jun,2021 **Research Associate**, *Indian Statistical Institute*, Kolkata, India.
Supervised by Prof. Ashish Ghosh, Machine Intelligence Unit
Project funded by DRDO, India: "Hardware Trojan Detection on PCB using X-ray Images".

Jun,2019–Aug,2020 **M.Tech Thesis**, *Institute for Development and Research in Banking Technologies*, Hyderabad, India.
Supervised by Dr. Rajarshi Pal, Centre for Excellence in Cyber Security
Project: "Reversible Data Hiding in Color Images".

Publications

2024 **N. Shah**, P. Goyal and R. Prasad, "Importance Sampling Based Federated Unsupervised Representation Learning," ICASSP 2024 - 2024 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Seoul, Korea, Republic of, 2024, pp. 7565-7569

2023 Madhan-Sohini, A., Dominic, D., **Shah, N.,** Prasad, R. (2023, December). Over-the-air clustered wireless federated learning. In 2023 IEEE Globecom Workshops (GC Wkshps) (pp. 203-208). IEEE.

Courses Taught

2024 **Teaching Assitant - Probability and Random process**, *IIIT Delhi*, Delhi, India.

2023 **Teaching Assitant - Convex Optimization**, *IIIT Delhi*, Delhi, India.

2023	**Teaching Assistant - Distributed and Federated Machine Learning**, *IIIT Delhi*, Delhi, India.

Professional Activities

Conference	Poster accepted at **ICDCN 2025**, IIT Hyderabad.
Conference	Paper accepted at **CODS-COMAD Dec'24**, IIT Jodhpur - YRS Track.
Workshops	Abstract selected as a poster at **WiML workshop - NeurIPS** 2024, Vancouver, Canada.
Summer School	Selected to attend **EEML** summer school 2024 in Novi Sad, Serbia from July 15-21, 2024. I was also selected to present my work as a poster.
Summer School	Selected to attend **OxML** summer school virtually from July 1-5, 2024.
Conference	Attended **IEEE ICASSP**, Seoul, S.Korea to present the paper "Importance Sampling Based Federated Unsupervised Representation Learning" from 14-19 April, 2024.
Conference	Attended **CODS-COMAD**, January 2024
Workshops	Attended **IEEE GlobeCom** Workshops, Kuala Lumpur, Malyasia to present the paper "Over-the-air clustered wireless federated learning" from 3-8 December, 2023.
Research Expo	Presented poster on "Clustered wireless federated learning" at **RIISE** 2023.
Research Symposium	Presented at **IEEE SPS Seasonal School** on AI for Optimisation in Signal Processing Research Symposium on " Decentralized Federated Learning.
Cyber Drill	Took part in annual cyber drill banks in India at **IDRBT** in 2020.
Hackathon	Co-organized a **hackweek** in SCIS,University of Hyderabad in 2019.
Workshop	Took part in workshops for System Lab Administration and Campus Network Facilities in 2017.

Membership and Activities in Professional Associations

IEEE	Member since 2023, participated in IEEE ICASSP and GlobeCom conferences.
IEEE SPS	Member since 2024.
IEEE WIE	Member since 2024.
IEEE Young Professionals	Member since 2024.

Community Service

2020	Served as a joint secretary for a student organization.
2019	Served as hostel chairperson at University of Hyderabad.
2018	Served as a mess secretary for 2 months at the University of Hyderabad.
2018	Created a department website for the Department of Sociology, University of Hyderabad.
2017	Worked as a co-ordinator for the university fest(Sukoon) and community fest(Keraleeyam).

Professional Honors, Awards, and Fellowships

2025	Best Poster Award at ICDCN 2025
2024	Qualcomm travel grant to attend ICDCN 2025
2024	Travel grant to attend CODS COMAD Dec 2024

2024	WiML Corporate Travel Grant to attend NeurIPS 2024
2024	Full grant to attend EEML 2024
2024	IEEE SPS Travel Grant to attend IEEE ICASSP 2024
2024	Travel grant to attend CODS-COMAD 2024 January
2023	Prime Minister's Research Fellowship, SERB-FICCI
2021	Junior Research Fellowship, DST-SERB
2019	UGC-NET qualified
2019	GATE qualified
2014	Mathematics School Topper(Gold Medal)
2014	Computer-Maths Stream Topper(Gold Medal)

Skills

Programming	Python, Pytorch, Numpy, Scipy, Matlab, Latex, Markdown, C/C++
Technical	Convex Optimization, Bayesian Machine Learning, Classification, Deep Learning, Linear Algebra, Federated Learning
Soft Skills	Team Work, Agile, Observant, Responsible, Hard-Working

Languages

English	Proficient
Malayalam	Native
Tamil	Intermediate
Hindi	Intermediate
Arabic	Basic

References

Available upon request.